

FINDING OF NO SIGNIFICANT IMPACT/RATIONALE

FINDING OF NO SIGNIFICANT IMPACT: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined the proposed action and alternatives will not have significant impacts on the human environment and that preparation of an Environmental Impact Statement (EIS) is not required.

Rationale for Recommendations: The proposed action and alternatives would not result in any undue or unnecessary environmental degradation. The proposed action and alternatives will be in compliance with the Roswell Resource Management Plan and Record of Decision (October, 1997).

s/ T. R. Kreager

3/21/05

T. R. Kreager,
Assistant Field Manager, Resources

Date

ENVIRONMENTAL ASSESSMENT

For

Section 15

GRAZING AUTHORIZATION

ALLOTMENT #65005

**Township 5 South, Range 26, 27, 28 & 29 East
NMPM.**

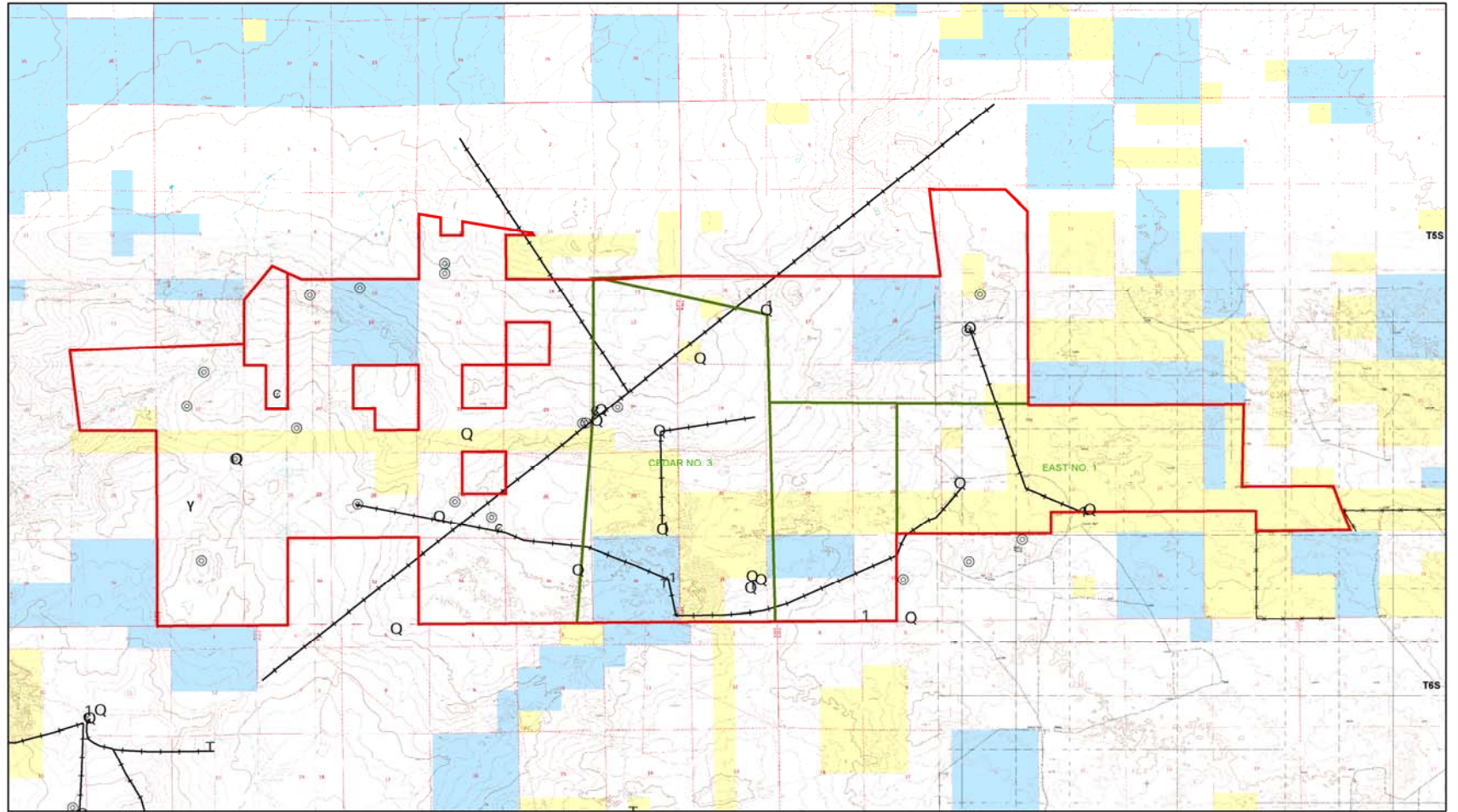
EA-NM-510-2005-0056

February 2006

**U.S. Department of the Interior
Bureau of Land Management
Pecos District
Roswell Field Office
Roswell, New Mexico**



Bojax South - 65005



- State
- Public
- Private
- Allotment Boundary
- Pasture Fence
- Water Pipeline

0 1 2 4 Miles

- Corral
- Trough

- 1 Windmill
- Storage Tank

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Produced by the RFO GIS Specialist on March 14, 2006.

I. Introduction

When authorizing livestock grazing on public range, Bureau of Land Management (BLM) has historically relied on a land use plan and environmental impact statement to comply with National Environmental Policy Act (NEPA). A decision by Interior Board of Land Appeals, however, affirmed that BLM must conduct a site-specific NEPA analysis before issuing a permit or lease to authorize livestock grazing. This environmental assessment fulfills the NEPA requirement by providing necessary site-specific analysis of effects of issuing a new grazing permit/lease on allotment #65005.

Scope of this document is limited to effects of issuing a 10-year grazing permit/lease. Other future actions such as range improvement projects will be addressed in a project specific environmental assessment. There are no current plans for additional management actions on this allotment.

A. Purpose and Need for the Proposed Action

Purpose of issuing a new grazing permit would be to reauthorize livestock grazing on public land on allotment #65005 and modify permit term to coincide with Bureau of Land Management (BLM's) schedule for Public Land (Rangeland Health Assessments) with permit/lease renewals.

This permit would specify types and levels of use authorized, and terms and conditions of authorization pursuant to 43 CFR 4130.3, 4130.3-1, 4130.3-2 and 4180.1. This existing permit expires 02/28/06.

B. Conformance with Land Use Planning

The Roswell Resource Management Plan/Environmental Impact Statement (October 1997) has been reviewed to determine if the proposed action conforms with land use plan's Record of Decision. This proposed action is consistent with the RMP/EIS.

C. Relationships to Statutes, Regulations, or Other Plans

This proposed action is consistent with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (43 U.S.C. 315 et seq.), as amended; the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.) as amended; the Federal Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Executive Order 11988, Floodplain Management and Executive Order 11990, Protection of Wetlands.

Proposed Action and Alternatives

A. Proposed Action:

This proposed action is to authorize Singleton Family Trust, a grazing permit for Bojax Ranch BLM allotment #65005. This permit would authorize 100 Animal Units (AU's) yearlong at 100 percent federal range for 1,200 Animal Unit Months (AUM's) for allotment #65005. Grazing use would be from March 1 to the last day of February of each year. Cattle are the class of livestock proposed for authorization.

B. Authorize Grazing at Current Levels With additional Terms and Conditions for East Pasture: East Pasture lies within the LPC Core Area.

To authorize a grazing lease on Bojax allotment # 65005 for 100 Animal Units at 100% Federal Range for 1,200 Animal Unit Months (AUM's). Permitted active use will be 100 AUs for 1,200 AUMs yearlong. Grazing use would be from March 1 to last day of February of each year. Implement those following terms and conditions. Changes to these terms and conditions may be initiated by either party under a consultation and coordination process.

1. Robel's vegetative monitoring methodology which has been adopted by the five state Lesser Prairie Chicken Interstate Working Group will be implemented to ensure that lesser prairie chicken (*Tympanuchus pallidicinctus*) habitat requirements are met and maintained. This methodology is available for review at the Roswell Field Office. If prairie chicken habitat requirements are not being met as a result of livestock grazing practices, changes may be necessary.

Shrub coverage - 25 to 30% composition of entire vegetative community.

Forb coverage - 10 to 15% composition of entire vegetative community.

Grass coverage - 60% composition of entire vegetative community; 10% with a visual obstruction reading (VOR) > or equal to 13 inches and an average VOR of 4.0 inches.

2. Livestock grazing management changes may result from periods of abnormal climatic patterns and will depend upon vegetative condition due to these climatic changes.

3. A range evaluation will take place every three to five years and adjustments or management changes will be made if necessary.

C. No Permit Authorization Alternative:

This alternative would not issue a new grazing permit. Under this alternative, there would be no livestock grazing authorized on public land within allotment #65005.

D. Convert the Grazing Use Authorization To Establish a Set Stocking Rate for the Allotment and Apply the Conditions From Alternative B.

Grazing authorizations for Section 15 Leases (the allotments lying outside the Grazing District boundary) are established by the amount of forage produced on public land; public land is often scattered and not well blocked. The Grazing Regulations do permit consideration of establishing a set stocking level for this allotment through the consultation process. To achieve this action a forage allocation review is required. The amount of forage produced on all private, state and public land is considered; grazing authorization is established by percent of forage produced on public land.

Due to resource concerns with the lesser prairie chicken and the sand dune lizard (*Sclerophorus arenicolus*) conditions outlined in Alternative B would be applied under this alternative.

Public land parcels are very scattered within this allotment and vary in size from 40 to 800 acres. Also only the eastern portion of this allotment is within LPC habitat area and amount of public land is minimal, therefore, this alternative will not be analyzed.

A. General Setting

Allotment #65005 is located in Chaves County, approximately 30 miles northeast of Roswell, New Mexico. The allotment consists of 6,221 acres of public land and 18,769 acres of private land. This allotment also has 2,400 acres State land. This allotment is located in: Township 5 South, Range 26, 27, 28 & 29 East NMPM.

Livestock numbers for the ranch are controlled under this Section 15 permit. Permittee is billed for amount of forage available for livestock on federal land. Vegetation monitoring studies are used to determine allowable number of livestock on this allotment.

Following resources or values are not present or would not be affected: Prime/Unique Farmland, Areas of Critical Environmental Concern, Minority/Low Income Populations, Wild and Scenic Rivers, Hazardous/Solid Wastes, Wetlands/Riparian Zones, Floodplains, and Native American Religious Concerns. Cultural inventory surveys would continue to be required for public actions involving surface disturbing activities.

B. Affected Resources

1. **Soil:** In general, soil in this area is very shallow and well-drained to moderately deep. Surface layers are loam and fine sandy loam. overlying dense layers of soft or cemented layers of gypsum material. This area is covered in The Soil Survey of Chaves County New Mexico, Northern Part, published by Natural Resource Conservation Service (NRCS). A copy of this publication may be reviewed at the BLM Roswell Field Office or at local NRCS office: Seven major soil associations exist on this allotment:

Faskin fine sand, Jalmar-Roswell-Pyote association, Ratliff-Redona association, Roswell-Jalmar fine sand, Redona-Canez association, Pyote-Faskin association and Stromal-Faskin-Malstrom.

Faskin fine sand (FaA)

This deep, well-drained soil is on high terraces in the eastern part of survey area. Permeability of this soil is moderate, available water capacity is high, runoff is medium, water erosion is moderate, while soil blowing hazard is very high. Potential plant community is mainly sand bluestem (*Andropogon hallii*), little bluestem (*Schizachyrium scoparium*), sand dropseed (*Sporobolus cryptandrus*), plains bristlegrass (*Setaria macrostachya*) and shinnery oak (*Quercus havardii*).

Jalmar-Roswell-Pyote association (JRC)

Soil is 50 percent Jalmar fine sand, 20 percent Roswell fine sand, and 20 percent Pyote fine sand. Jalmar soil is deep and well drained. Permeability of this soil is moderate, water capacity is moderate, runoff is slow, water erosion is slight, while soil blowing hazard is very high. Roswell soil is deep and excessively drained. Permeability of this soil is rapid, water capacity is low, runoff is slow, water erosion is slight, and hazard of soil blowing is very high. Pyote soil is deep and well drained. Permeability of this soil is moderately rapid, water capacity is moderate, runoff is slow, water erosion is slight, and hazard of soil blowing is very high. Potential plant community contains bluestems, bristlegrass (*Setaria* spp.), dropseeds (*Sporobolus* spp.), and shinnery oak.

Ratliff - Redona association (RBA)

This association occurs on high terraces, with 45 percent Ratliff fine sandy loam and 35 percent Redona fine sandy loam. This soil is deep and well-drained. Permeability of Ratliff soil is moderate, water capacity is high, runoff is slow, water erosion is slight, and hazard of soil blowing is high. Redona soil is deep and well-drained. Permeability of Redona soil is moderate, water capacity is very high, runoff is slow, water erosion is slight, and hazard of soil blowing is high. Potential plant community is mainly black grama (*Bouteloua eriopoda*), windmill grass (*Chloris* spp.), little bluestem and blue grama (*Bouteloua gracilis*). Mesquite (*Prosopis glandulosa*) readily invades this unit as it deteriorates.

Roswell-Jalmar fine sand (RPD)

This soil is 60 percent Roswell fine sand and 35 percent Jalmar fine sand. This Roswell soil is hummocky sand dunes and Jalmar sand is in depressional areas. Roswell soil is deep and excessively well drained. Permeability is rapid and water capacity is low. Runoff is slow, and hazard of water erosion is slight, while soil blowing is very high. The Jalmar soil is deep and well drained. Permeability is moderate and water capacity is moderate. Runoff is slow, and hazard of water erosion is slight, while soil blowing is very high. Potential plant community is mainly bluestems, sand paspalum (*Paspalum stramineum*), and bristlegrass. As the unit deteriorates threeawn (*Aristida* spp.) and shinnery oak become more common.

Stromal-Faskin-Malstrom fine sands (SOA)

This unit is gently undulating occurring on high terraces. This unit is 50 percent Stromal fine sand, 30 percent Faskin fine sand and 15 percent Malstrom fine sand all on 0 to 2 percent slopes.

Stromal soil is deep and well drained with moderately rapid permeability. Available water capacity is high and effective rooting depth is 60 inches or more. Runoff is slow with water erosion hazard and soil blowing slight and very high respectively. Faskin soil is deep and well drained. Permeability is moderate and water capacity is high. Effective rooting depth is 60 inches or more with medium runoff. Water erosion hazard and soil blowing are moderate and very high respectively. Malstrom soil is deep and well drained and formed in calcareous alluvial and eolian deposits. Permeability is moderately rapid and available water capacity is high. Effective rooting depth is 60 inches or more and runoff is medium. Water erosion hazard and soil blowing is moderate and very high respectively.

Redona-Canez association (RHA)

This soil unit occurs on high terraces with 60 percent Redona fine sandy loam and 35 percent Canez fine sandy loam. The Redona soil is on low ridges and Canez soil is in depressional areas. Ratliff and Blakeney soil makes up the remainder of the acreage at 5 percent. Both Redona and Canez soil is deep and well drained and formed in alluvium derived dominantly from calcareous material. Permeability is moderate and water capacity is very high. Effective rooting depth is 60 inches or more with medium runoff. Water erosion hazard and soil blowing is moderate and high respectively.

Pyote-Faskin association (PYB)

This gently undulating association occurs on high terraces with 0 to 5 percent slopes. This soil unit is 55 percent Pyote loamy fine sand and 35 percent Faskin loamy fine sand. Pyote soil is on ridges and Faskin is in depressional areas. Malstrom and Jalmar soil is also included in depressional areas making up 10 percent of total acreage. The Pyote soil is deep and well drained with moderate permeability. Effective rooting depth is 60 inches or more with slow runoff. Water erosion hazard is slight and soil blowing is very high. Faskin soil is also deep and well-drained and formed in alluvial and eolian deposits. Permeability is moderate and available water capacity is high with medium runoff. Water erosion and soil blowing is moderate and very high respectively.

2. Vegetation:

This allotment lies within shinnery-oak dune and grassland vegetative communities as identified in Roswell Resource Management Plan/Environmental Impact Statement (RMP/EIS). Appendix 11 of Draft RMP/EIS describes Desired Plant Community (DPC) concept and identifies components of each community. Primary features in shinnery oak dune (SOD) communities are topography influenced by aeolian and alluvial sedimentation on upland plains forming hummocks, dunes, sand ridges and swales and presence of shinnery oak (*Quercus havardii*). Topography is gently sloping and undulating sandy plains, with moderate to very steep hummocky dunes of up to ten feet and more in height scattered throughout. Some dunes are stabilized with vegetation, while a number of them are unstable and shifting. Dune blowouts with shinnery oak, sand sage (*Artemisia filifolia*) and bluestem (*Andropogon* spp.), either isolated or in dune complexes are common in this community. Dominant grasses include sand

bluestem (*Andropogon hallii*), little bluestem and threeawn.

The vegetative cover by percent composition objectives for shinnery oak dune (SOD) community are grasses 50-70 %, forbs 10-15%, shrubs & trees 25-40%. The ground cover objectives for this community are: bare ground 5-20%, litter 25-70%, small & large rock 0-1%, grass & forbs 16-40% and shrubs & trees 3-17%.

Primary features in Grassland communities include grasses and forbs comprising the majority of vegetative cover by composition. The vegetative cover by percent composition objectives for the Grassland (GR) community are grasses 30-85 %, forbs 10-15%, shrubs & trees 1-10%. The ground cover objectives for this community are: bare ground 14-60%, litter 8-44%, small & large rock 0-30%, grass & forbs 15-52% and shrubs & trees 3-12%.

Primary ecological (range) sites on this allotment are Sandy Loam, Sandy Plains & Deep Sand. Ecological site descriptions are available for review at Roswell BLM office or any Natural Resources Conservation Service office or may be accessed at www.nm.nrcs.usda.gov.

Three permanent monitoring sites were established in 1981; most recent data was collected in late 2004. Current vegetative data for this allotment indicates an average of 327 lbs/ac production. Middle Pasture is most productive with 466 lbs/ac with mesa dropseed (*Sporobolus flexuosus*) and purple threeawn (*Aristida purpurea*) comprising 14.3 and 7.4 percent composition respectively. However shinnery oak is 55 percent of composition for this pasture. Cedar Pasture has currently 300 lbs/ac. Mesa dropseed and purple threeawn comprise 23 and 28 percent composition for this pasture respectively. Additional perennials, fall witchgrass (*Panicum capillare*) and little bluestem comprise a combined 27 percent composition. East Pasture's production is 216 lbs/ac with purple threeawn comprising 31 percent of composition. Woolly sumpweed (*Iva dealbata*), a perennial forb is 33.5 percent of the composition.

3. **Wildlife:**

At least 33 species of mammals occur on or utilize this allotment. The diversity of small mammals provide an excellent prey base for carnivores such as coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), badger (*Taxidea taxus*), hooded skunk (*Mephitis macroura*) and striped skunk (*Mephitis mephitis*).

Some of small mammals that provide a prey base include the black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus auduboni*), spotted ground squirrel (*Spermophilus spilosoma*), pocket mice (*Perognathus flavus*), deer mouse (*Peromyscus maniculatus*), kangaroo rats (*Dipodomys* spp.), northern grasshopper mouse (*Onychomys leucogaster*), harvest mice (*Reithrodontomys* spp.) and white-throated woodrat (*Neotoma albigula*).

This allotment also provides habitat for a sustainable population of mule deer (*Odocoileus hemionus*) and pronghorn (*Antilocapra americana*). This area contains brush or tree species that could provide quality cover for larger animals. Other game species occurring include mourning dove (*Zenaidura macroura*), and scaled quail (*Callipepla squamata*). Raptors that utilize this area

on a more seasonal basis include Swainson's hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamacensis*), ferruginous hawk (*Buteo regalis*), American kestrel (*Falco sparverius*) and great-horned owl (*Bubo virginianus*). Numerous passerine birds utilize grassland areas. Most common include: western meadowlark (*Sturnella neglecta*), mockingbird (*Mimus polyglottos*), horned lark (*Eremophila alpestris*), killdeer (*Charadrius vociferus*), loggerhead shrike (*Lanius ludovicianus*), and vesper sparrow (*Pooecetes gramineus*).

This warm prairie environment supports a large number of reptile species. More common reptiles include short-horned lizard (*Phrynosoma douglasii*), lesser earless lizard (*Holbrookia maculata*), eastern fence lizard (*Sceloporus undulatus*), coachwhip (*Masticophis flagellum*), bullsnake (*Pituophis melanoleucus sayi*), prairie rattlesnake (*Crotalus v. viridis*), and western rattlesnake (*Crotalus viridis*).

A general description of wildlife occupying or potentially utilizing this proposed action area is located in the Affected Environment Section (p. 3-62 to 3-71) of Draft Roswell RMP/EIS (9/1994).

4. Threatened and Endangered Species: There are no known resident populations of threatened or endangered species on this allotment. A list of federal threatened, endangered, and candidate species reviewed for this EA can be found in Appendix 11 of the Roswell RMP (AP11-2). Of listed species, avian species such as bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*) may be observed in this general geographic area during migration or winter months. There are no known records of these species having occurred on this allotment, and no designated critical habitat areas exist.

Lesser Prairie Chicken

Recently a petition was filed with U. S. Fish and Wildlife Service (FWS) to list lesser prairie chicken as threatened. On June 1, 1998 FWS announced a finding for this petition. After review of all available scientific and commercial information, service finds that listing this species is warranted but precluded by other higher priority actions to amend Lists of Endangered and Threatened Wildlife and Plants. Lesser prairie chickens were added to the Service's candidate species list.

In southeastern New Mexico, lesser prairie chickens exist in shrub-dominated High Plains Bluestem Subtype by using mixed stands of tall grass and shinnery oak.

Male prairie chickens visit or establish booming grounds (leks) from early March to late May, with the peak booming activity occurring around mid April. Booming grounds can be found in mesquite shortgrass, shinnery oak grasslands, shinnery oak dunes, abandoned oil/gas pads, pipelines and roads. Basic requirement for lek sites is visibility of immediate surroundings (shortgrass and topography).

In areas of shinnery oak, nesting studies (Copelin 1963, Riley 1978) indicate that these birds prefer shinnery oak rangeland habitat dominated by mid and tall grass species. Wisdom (1980)

demonstrated that nesting success was enhanced by presence of tall, wide clumps of sand bluestem, which are found in a few near-climax areas in shinnery oak-grasslands, while areas devoid of sand bluestem were not highly conducive to nesting success. In areas where sand bluestem is scarce, little bluestem apparently serves as an acceptable substitute (Merchant 1982).

Riley et al. (1992) found that most successful nests occurred where basal composition of sand bluestem was greater and height of vegetation above successful nests averaged 67 cm, while height of vegetation above unsuccessful nests averaged 35 cm. Copelin (1963) found that most successful nests were placed between clumps of grass residue left from previous year's growth that provided overhead cover.

Brooding areas are often within habitats which are in lower seral stages usually having a high proportion of bare ground and annual forbs (Riley et al. 1992, Jones 1963).

Food requirements vary among seasons. Prairie chickens rely heavily (97%) on forbs and other green plant material during spring and invertebrates in summer. Early fall diets consist of invertebrates and green plant material, while winter diets consist of mast from shinnery oak.

Above is a general description of prairie chicken habitat requirements. As with most wildlife species, especially upland game birds, precipitation plays a large role in population fluctuations and habitat conditions. Precipitation patterns have fluctuated drastically for the last twenty years. During the mid 1980's the precipitation was above normal and chicken populations responded very well. With the exception of two years, precipitation was below normal during the 1990's.

Current lesser prairie chicken habitat within this allotment is restricted to the easternmost pasture and is in fair condition (Subtype 2). Most bluestems that would provide some nesting habitat are located on both public and private land. Monotypic stands of shinnery oak may exist in this allotment. There is no Robel study data available for this allotment.

Sand Dune Lizard

The sand dune lizard is listed by New Mexico Department of Game and Fish as Endangered, Group 2 and by the U. S. Fish and Wildlife Service as a Category 2, Notice of Review species. The sand dune lizard only occurs in the southeastern corner of New Mexico and the western region of Texas. Within that range it's habitat is restricted to active sand dunes and their peripheries (Degenhardt and Jones 1972). Shinnery oak is the dominant plant species that surrounds top edges of active sand dunes, with a small composition of grasses inside blowout areas.

During 1991 a study was begun to examine the effects of removal of shinnery oak on lizard habitat. Through five years of research it was demonstrated that there were 70-94% fewer lizards in treated pastures as compared to non-treated pastures.

5. **Livestock Management:** This allotment is a "C" (Custodial) category due to small amounts of public land present. This allotment consists of three pastures for cattle. Livestock waters are

located on private, state and public land. In shinnery oak dominated pastures, livestock are removed during periods that shinnery is toxic, normally mid March and April, to prevent livestock loss.

6. **Visual Resources:** The allotment is located in a Class IV Visual Management Area. The Class IV rating means that contrasts may attract attention and be a dominant feature in the landscape in terms of scale. However, the changes should repeat the basic elements of the landscape. However, these changes should repeat landscape basic elements.

7. **Water Quality Drinking/Ground:** No perennial surface water is found on public land on this allotment. Fresh water sources are in Quaternary Alluvium and San Andres Formations. Depth to fresh water has been found at approximately 20 to 180 feet in Quaternary Alluvium in the area. Depth to fresh water has been found from approximately 250 feet to 500 feet in San Andres Formation in the area (New Mexico State Engineer Office data).

8. **Air Quality:** Air quality in this region is generally good. This allotment is in a Class II area for Prevention of Significant Deterioration of air quality as defined in the public Clean Air Act. Class II areas allow a moderate amount of air quality degradation.

9. **Recreation:** Recreation opportunities are very limited in this grazing allotment because the public has limited legal/physical access to public land. The parcels of public land within this allotment are scattered and are generally surrounded by private land.

Off Highway Vehicle designation for public land within this allotment are classified as "Limited" to existing roads and trails.

10. **Cave/Karst:** This allotment is not located within a designated area of low karst and cave potential. A complete significant cave or karst inventory has not been completed for public land located in this grazing allotment. No significant caves or karst features are known to exist within this allotment.

11. **Noxious Weeds** - Noxious and Invasive species: A noxious weed is defined as a plant that causes disease or has other adverse effects on human environment and is, therefore, detrimental to public health and to agriculture and commerce of the United States. Generally, noxious weeds are aggressive, difficult to manage, parasitic, are carriers or hosts of harmful insects or disease, and are either native, new to, or not common in the United States. In most cases, however, noxious weeds are non-native species.

The list currently includes the following weeds: 1) African rue (*Peganum harmala*), 2) black henbane (*Hyoscyamus niger*), 3) bull thistle (*Cirsium vulgare*), 4) camelthorn (*Alhagi pseudalhagi*), 5) Canada thistle (*Cirsium arvense*), 6) dalmatian toadflax (*Linaria genistifolia* ssp. *Dalmatica*), 7) goldenrod, (*Solidago Canadensis*) 8) leafy spurge (*Euphorbia esula*), 9) Malta starthistle (*Centaurea melitensis*), 10) musk thistle (*Carduus nutans*), 11) poison hemlock (*Conium maculatum*), 12) purple starthistle (*Centaurea calcitrapa*), 13) Russian knapweed (*Centaurea repens*), 14) Scotch thistle (*Onopordum acanthium*),

15) spotted knapweed (*Centaurea maculosa*), 16) teasel (*Dipsacus fullonum*), 17) yellow starthistle (*Centaurea solstitialis*), 18) yellow toadflax (*Linaria vulgaris*), 19) Russian olive (*Elaeagnus angustifolia*), 20) Saltcedar (*Tamarix chinensis*), 21) Siberian elm (*Ulmus pumila*).

Of these noxious weeds listed, those with known populations in Roswell District are African rue, non-native thistles (*Cirsium* spp.) such as bull thistle and Canada thistle, leafy spurge, goldenrod, Malta starthistle, Russian knapweed, and Scotch thistle. Also "problem weeds" of local concern are cocklebur (*Xanthium* spp.), buffalobur (*Curcubita foetidissima*) and spiny cocklebur (*Xanthium spinosum*). "Problem weeds" are those weeds which may be native to the area but whose populations are out of balance with other local flora.

Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Noxious weeds cause estimated losses to producers \$2 to \$3 billion annually. These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from noxious weeds; (2) decreased quantity of agricultural products due to noxious weed infestations; and (3) costs to control and/or prevent the noxious weeds.

Further, noxious weeds can negatively affect livestock and dairy producers by making forage either unpalatable or toxic to livestock, thus decreasing livestock productivity and potentially increasing producers' feed and animal health care costs. Increased costs to operators are eventually borne by consumers.

Noxious weeds also affect recreational uses, and reduce realty values of both directly influenced and adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control prevention is not exercised.

IV. Environmental Impacts

A. Impacts of the Proposed Action

1. **Soil:** Grazing activities will continue to have some soil impact. These impacts may include: removal of standing vegetation and litter; soil compaction along livestock trails or soil compaction may occur if livestock are concentrated during prolonged periods when soil is wet. These effects can lead to reduced infiltration rates and increased runoff. Reduced vegetative cover and increased runoff can result in higher erosion rates and soil losses, making it more difficult to produce forage and to protect soil from further erosion. These adverse effects can be greatly reduced by maintaining adequate vegetative cover.

Proper utilization levels and grazing distribution patterns are expected to retain sufficient vegetative cover on this allotment as a whole and this would maintain the soil stability. Soil compaction and excessive vegetative use would occur at small, localized areas such as drinking locations, along trails and bedding areas. Positive affects from this proposed action include speeding up of nutrient cycling processes and soil crust chipping by hoof action stimulating seedling growth and water infiltration.

2. **Vegetation:** Vegetation would continue to be grazed and trampled by domestic livestock as well as other herbivores. Ecological condition and trend is expected to remain stable and/or improve over long-term with proposed authorized numbers of livestock and existing pasture management. Rangeland monitoring data indicates that there is an adequate amount of forage for multiple resource use objectives.

3. **Wildlife:** Domestic livestock would continue to utilize vegetative resources needed by a variety of wildlife species for life history functions within this allotment. Maintenance and operation of existing base water would continue to provide dependable water sources for wildlife, as well as livestock.

4. **T&E species:** Livestock grazing resulting from issuing a grazing lease, may affect, but not likely to adversely affect the bald eagle. It is expected that habitat and range condition would be maintained or improved by authorizing grazing conducive with multiple resource vegetative production goals. Habitat for wintering bald eagles would not be negatively impacted by livestock grazing. There would be no impact to peregrine falcons since important riparian nesting sites are not found on this allotment.

Special Status Species

Under this proposed action, there would be minimal impacts to sand dune lizards due to dispersal of livestock. Areas where there is a concentration of livestock (waterings and fence corners) habitat may be of lower quality, but these areas are small in nature.

Under the proposed action negative impacts to Lesser Prairie chickens are not anticipated. Except that during prolonged drought conditions, pastures may need to be rested to ensure adequate nesting habitat remains available.

5. **Livestock Management:** No adverse impacts are anticipated under this proposed action. If future monitoring indicates a need for an adjustment in livestock numbers, this determination will be made in accordance with established protocols.

6. **Visual Resources:** Visual resources will be managed to meet the Visual Resource Management (VRM) class IV. All proposed management activities will be evaluated with regard to visual resource management and those projects that are compatible with the character of the natural landscape will be encouraged. No management actions should be proposed that would degrade visual quality to the extent that a change in any VRM class will result. All

facilities within this allotment should be painted olive green to blend in with the existing environment.

7. **Water Quality Drinking/Ground:** Direct impacts to surface water quality would be minor, short-term impacts during stormflow. Indirect impacts to water-quality related resources, such as fisheries, would not occur. This proposed action would not have a significant effect on ground water. Livestock would be dispersed over this allotment, and soil would filter potential contaminants.

8. **Air Quality:** Dust levels under this proposed action would be slightly higher than under the no grazing alternative due to allotment management activities. Levels would be within limits allowed in a Class II area for Prevention of Significant Deterioration of air quality.

9. **Recreation:** Grazing would have little or no affect on the recreational opportunities, since the recreating public has no legal or physical access to this parcel of public land. Recreation activities that could occur within this grazing allotment are limited or non-existent due to land patterns

10. **Caves/Karst:** A complete significant cave or karst inventory has not been completed for the public land located in this grazing allotment. Presently, no known significant caves or karst features have been identified within this allotment. If at a later date, a significant cave or karst feature is located on public land within this allotment, that cave or feature may be fenced to exclude livestock grazing and Off Highway Vehicle Use. A separate Environmental analysis would be prepared to construct this enclosure fence. This allotment is located within a designated area of Low Karst or Cave Potential. .

11. **Non-native and Invasive species:** There are no known noxious weed populations found within this allotment.

B. Authorize Grazing at Current Levels With additional Terms and Conditions:

Impacts to all resources would remain the same as this proposed action with exception of Special Status Species (lesser prairie chicken). By implementing Robel Pole vegetative monitoring and new terms and conditions, lesser prairie chicken habitat would be maintained with management changes cooperatively made during drought periods to minimize impacts on nesting habitat. These terms and conditions would be applied to East Pasture only.

C. No Permit/Lease Authorization alternative:

Impacts to all resources would be similar to those described in Alternative A, but may be improved slightly. Grazing authorization for public land would be eliminated however, grazing of private and state land would most probably continue. Unless public land was fenced to exclude livestock they would continue to be grazed but with a lesser number of livestock.

If fenced these tracts of public land could provide scattered “islands” of habitat for lesser prairie chickens that offer potential (but not guaranteed) benefits. The estimated costs associated with fencing of this public land would be approximately \$5500/mile; even with the use of existing fence on public land and many miles of new fence would be required. In addition there would be annual maintenance cost for this fence.

If public land was fenced, livestock management on private and state would continue but management and distribution problems could occur.

V. Cumulative Impacts

All allotments that have permits/leases with the BLM will undergo scoping and analysis in conformance with NEPA. Allotment #65005 is surrounded by others that will undergo this process. If this proposed action is selected, there would be no change in cumulative impacts since it does not vary from current situations.

If the no livestock grazing alternative is selected, there would be little change in cumulative impacts as long as surrounding allotments continue to be stocked at their current level. If permitted numbers are reduced on surrounding allotments as well, economics of surrounding communities and/or minority/low income populations would be negatively impacted.

The No Grazing alternative was considered, but not chosen in the Rangeland Reform Environmental Impact Statement (EIS) Record of Decision (ROD) (p. 28). Elimination of grazing in Roswell Field Office Area was also considered but eliminated by the Roswell RMP/ROD (pp. ROD-2).

VI. Residual Impacts

Vegetative monitoring studies have shown that grazing, at current permitted numbers of animals, is sustainable. If mitigation measures are enacted, then there would be no residual impacts to this proposed action.

VII. Socio-Economic Impacts

A description of the economic, social and cultural conditions by geographic region within New Mexico can be found in 2000 New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management Final EIS. Authorizing grazing impacts for this allotment under Proposed Alternative on economic, social and cultural conditions of southeast New Mexico would be positive. On a smaller scale, impacts of authorizing grazing for this allotment under this Proposed Action on economic, social and cultural conditions of Chaves County would also be positive.

VII. Mitigating Measures

Vegetation monitoring studies will continue to be conducted and permitted numbers of livestock will be adjusted if necessary. If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken at that time to mitigate those impacts.

IX. Public Land Health

Public Land (Rangeland) Health assessments were completed on this allotment during 2005. Based on these assessments and monitoring data, a Determination was made that public land within this livestock grazing allotment is in conformance with the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management. A copy of this assessment can be accessed at www.nm.blm.gov/rfo/index.htm.

X. BLM Team Members

Joseph Navarro – Rangeland Management Specialist
John Spain – Lead Rangeland Management Specialist
Tim Kreager – Assistant Field Manager (Resources)
Irene Gonzales-Salas - Realty Specialist
Jerry Dutchover Geologist
Pat Flanary - Archaeologist
Michael McGee- Hydrologist
Paul Happel – Natural Resource Specialist
Howard Parman – Environmental Planner
Ernest Jaquez – Wildlife Biologist

XI. PERSONS AND AGENCIES CONSULTED

Chaves County Public Land Use Advisory Committee
Jeff Bilberry – Permittee Representative
New Mexico Department of Game and Fish
New Mexico Energy, Minerals, and Natural Resources Department
- Forestry and Resource Conservation Division
New Mexico Environment Department - Surface Water Quality Bureau
New Mexico State Land Office
U.S. Fish and Wildlife Service - Ecological Services
U.S. Fish and Wildlife Service - Fishery Resources Office

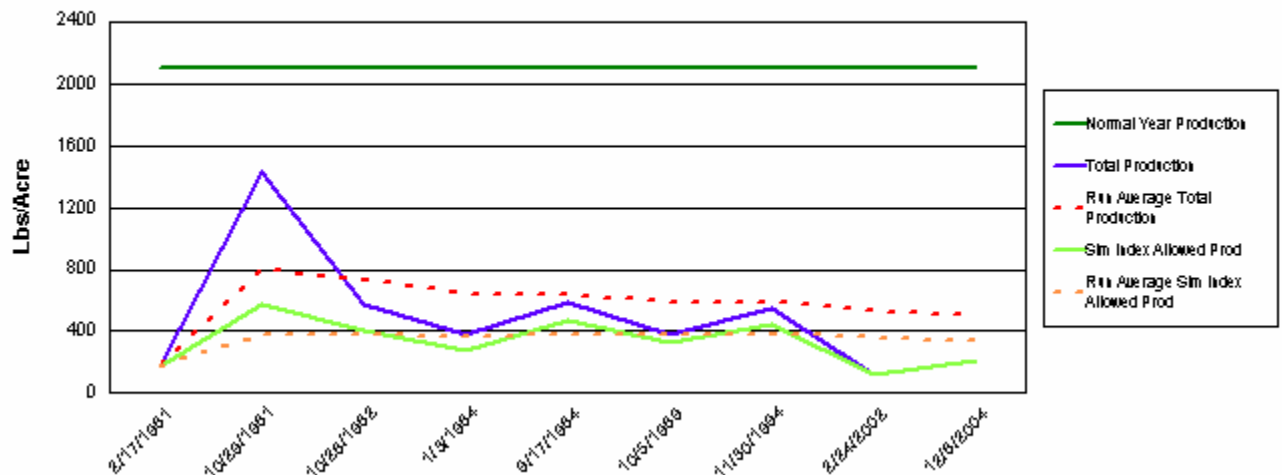
Production (lbs/ac) Data Trends

(Data Extracted From VMAP System)

VEGID:	281				Date Printed:			3/14/2006
Allot No.	Allotment	Ecosite ID		Ecosite Name		Site Name		
65005	BOJAX-SOUTH	070BY055NM		SANDY PLAINS CP-2		65005-EAST #1-D025		
Location:	T.	0050S	R.	0280E	Sec.	26	QtrQt	SWNW
	UTM-N						3745422.15	
CHAVES		County, NM					UTM-E	
							594345.48	
Soil Sur No		Soil Map Unit		Soil Tax		Soil Association		
NM644		SOA		STROMAL		STROMAL-FASKIN-		

Date	Range Cond.	Similarity Index	Normal Year Production	Total Production	Running Average Production	Sim Index Allowed Production	Running Average Sim Index Allowed Production
02/17/1981	39.00	7.95	2,100	167.00	167.00	167.00	167.00
10/29/1981	31.76	27.24	2,100	1,430.00	798.50	572.00	369.50
10/26/1982	39.08	19.62	2,100	574.00	723.67	412.00	383.67
01/03/1984	28.76	13.19	2,100	385.00	639.00	277.00	357.00
09/17/1984	55.00	22.48	2,100	586.00	628.40	472.00	380.00
10/05/1989	39.00	15.52	2,100	382.00	587.33	326.00	371.00
11/30/1994	36.00	21.00	2,100	554.00	582.57	441.00	381.00
02/24/2002	37.23	5.52	2,100	116.00	524.25	116.00	347.88
12/08/2004	32.42	10.30	2,100	216.37	490.04	216.37	333.26

Production Data For Study Site



Production (lbs/ac) Data Trends

(Data Extracted From VMAP System)

VEGID: 282 **Date Printed:** 3/14/2006

Allot No. 65005 **Allotment** BOJAX-SOUTH **Ecosite ID** 070BY063NM **Ecosite Name** DEEP SAND CP-2 **Site Name** 65005-MIDDLE #2-D026

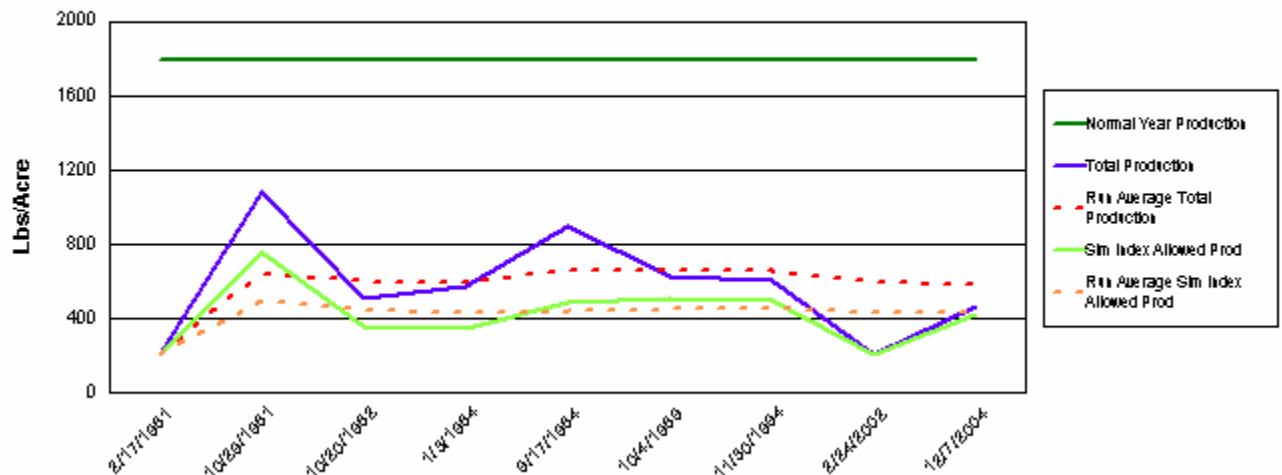
Location: T. 0050S R. 0280E **Sec.** 28 **QtrQt** SWSE **UTM-N** 3744449.15

CHAVES County, NM **UTM-E** 592071.37

Soil Sur No NM644 **Soil Map Unit** RPD **Soil Tax** ROSWELL **Soil Association** ROSWELL-JALMAR

Date	Range Cond.	Similarity Index	Normal Year Production	Total Production	Running Average Production	Sim Index Allowed Production	Running Average Sim Index Allowed Production
02/17/1981	37.00	11.33	1,800	206.00	206.00	204.00	204.00
10/29/1981	54.51	42.44	1,800	1,086.00	646.00	764.00	484.00
10/20/1982	29.11	20.11	1,800	509.00	600.33	362.00	443.33
01/03/1984	31.73	19.28	1,800	580.00	595.25	347.00	419.25
09/17/1984	39.00	27.39	1,800	902.00	656.60	493.00	434.00
10/04/1989	52.00	28.56	1,800	634.00	652.83	514.00	447.33
11/30/1994	42.00	27.50	1,800	609.00	646.57	495.00	454.14
02/24/2002	47.08	11.61	1,800	212.00	592.25	209.00	423.50
12/07/2004	47.01	23.77	1,800	468.14	578.46	427.77	423.97

Production Data For Study Site



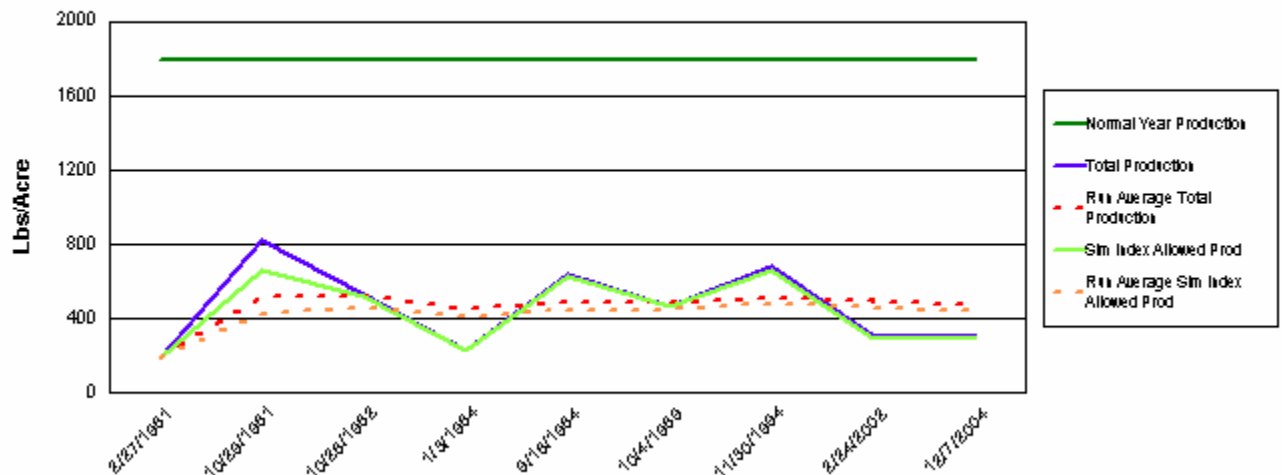
Production (lbs/ac) Data Trends

(Data Extracted From VMAP System)

VEGID:	283				Date Printed:		3/14/2006
Allot No.	Allotment	Ecosite ID	Ecosite Name		Site Name		
65005	BOJAX-SOUTH	070BY063NM	DEEP SAND CP-2		65005-CEDAR #3-D027		
Location:	T.	R.	Sec.	QtrQt	SESE	UTM-N	
	0050S	0270E	36				3743550.01
CHAVES	County, NM					UTM-E	587561.51
Soil Sur No		Soil Map Unit		Soil Tax		Soil Association	
NM644		RPD		ROSWELL		ROSWELL-JALMAR	

Date	Range Cond.	Similarity Index	Normal Year Production	Total Production	Running Average Production	Sim Index Allowed Production	Running Average Sim Index Allowed Production
02/27/1981	71.00	10.61	1,800	191.00	191.00	191.00	191.00
10/29/1981	50.70	36.61	1,800	827.00	509.00	659.00	425.00
10/26/1982	58.17	28.72	1,800	532.00	516.67	517.00	455.67
01/03/1984	76.46	13.00	1,800	234.00	446.00	234.00	400.25
09/18/1984	63.00	34.94	1,800	638.00	484.40	629.00	446.00
10/04/1989	73.00	26.11	1,800	472.00	482.33	470.00	450.00
11/30/1994	66.00	36.72	1,800	686.00	511.43	661.00	480.14
02/24/2002	54.10	16.50	1,800	303.00	485.38	297.00	457.25
12/07/2004	56.77	16.70	1,800	300.66	464.85	300.66	439.85

Production Data For Study Site



65005

BOJAX-SOUTH

EAST #1

Vegid#: 281

65005-EAST #1-D025

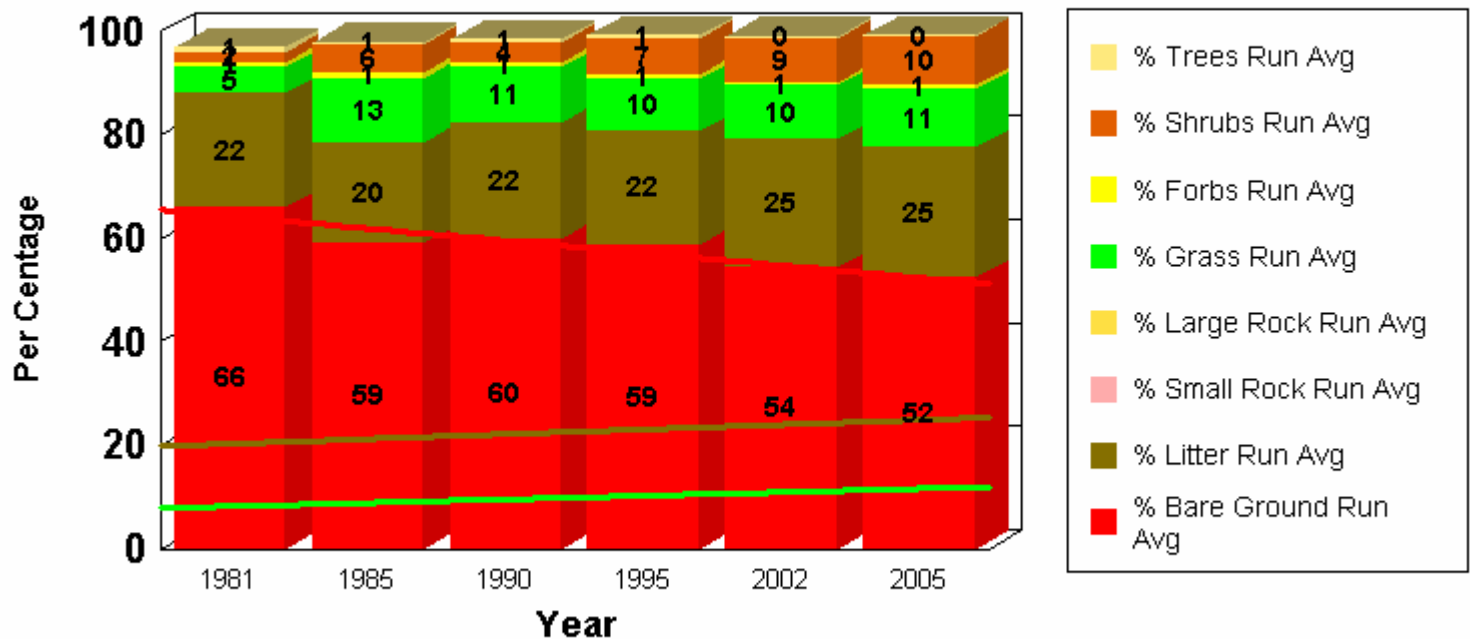
Ecological Site No.: 070BY055NM

Location: Township: 0050S Range 0280E Section 26 QtrQtr: SWNW

Year	Bare Ground	Litter	Small Rock	Large Rock	Forbs	Grass	Shrubs	Trees	Running Average Bground	Running Average Litter	Running Average Srock	Running Average Lrock	Running Average Forb	Running Average Grass	Running Average Shrubs	Running Average Trees
1981	66.00	22.00			1.00	5.00	2.00	1.00	66.00	22.00			1.00	5.00	2.00	1.00
1985	52.00	17.00				20.00	9.00	0.00	59.00	19.50			1.00	12.50	5.50	0.50
1990	62.00	28.00				7.00	1.00		60.00	22.33			1.00	10.67	4.00	0.50
1995	55.00	21.00				8.00	16.00		58.75	22.00			1.00	10.00	7.00	0.50
2002	37.00	36.00			0	12.00	15.00	0.00	54.40	24.80			0.50	10.40	8.60	0.33
2005	42.00	28.00			1.00	15.00	14.00	0.00	52.33	25.33			0.67	11.17	9.50	0.25

Running Average Ground Cover Trends

With Trendlines



65005

BOJAX-SOUTH

MIDDLE #2

Vegid#: 282

65005-MIDDLE #2-D026

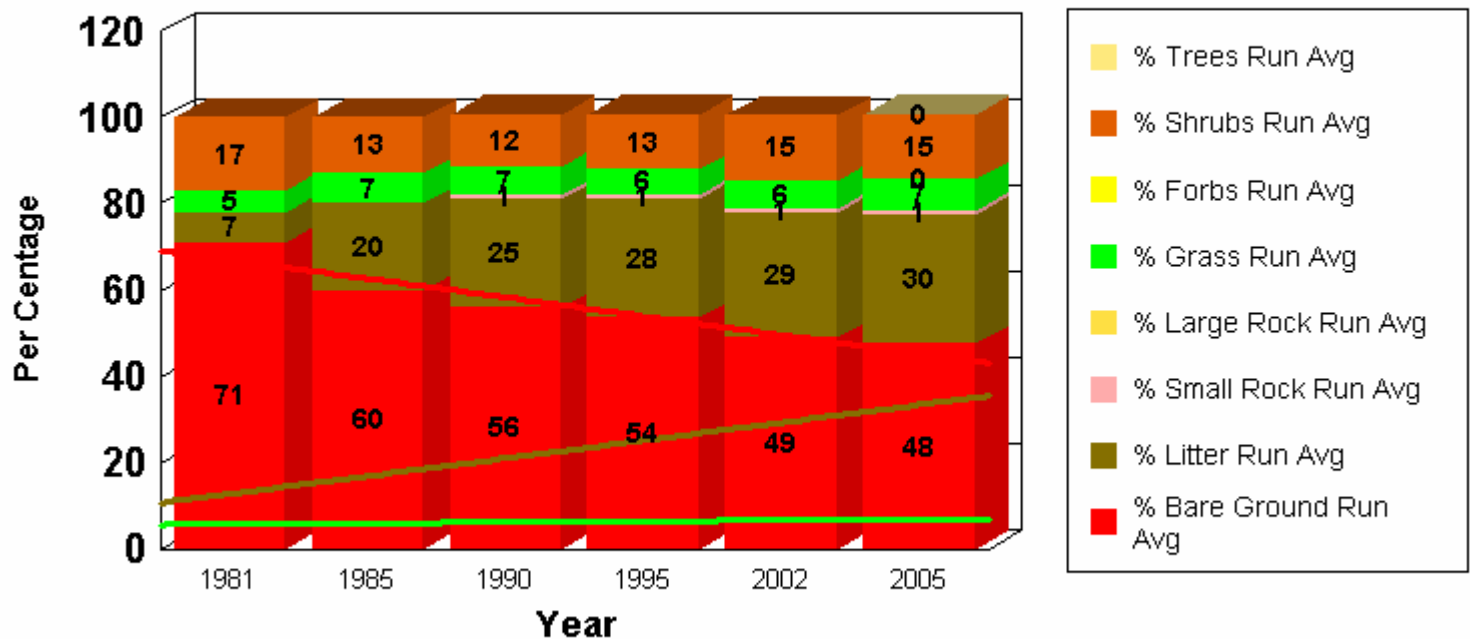
Ecological Site No.: 070BY063NM

Location: Township: 0050S Range 0280E Section 28 QtrQtr: SWSE

Year	Bare Ground	Litter	Small Rock	Large Rock	Forbs	Grass	Shrubs	Trees	Running Average Bground	Running Average Litter	Running Average Srock	Running Average Lrock	Running Average Forb	Running Average Grass	Running Average Shrubs	Running Average Trees
1981	71.00	7.00				5.00	17.00		71.00	7.00				5.00	17.00	
1985	49.00	33.00				9.00	9.00		60.00	20.00				7.00	13.00	
1990	48.00	35.00	1.00			6.00	10.00		56.00	25.00	1.00			6.67	12.00	
1995	46.00	36.00				3.00	15.00		53.50	27.75	1.00			5.75	12.75	
2002	31.00	34.00				9.00	25.00		49.00	29.00	1.00			6.40	15.20	
2005	40.00	35.00			0	11.00	14.00	0.00	47.50	30.00	1.00		0	7.17	15.00	0.00

Running Average Ground Cover Trends

With Trendlines



65005

BOJAX-SOUTH

CEDAR #3

Vegid#: 283

65005-CEDAR #3-D027

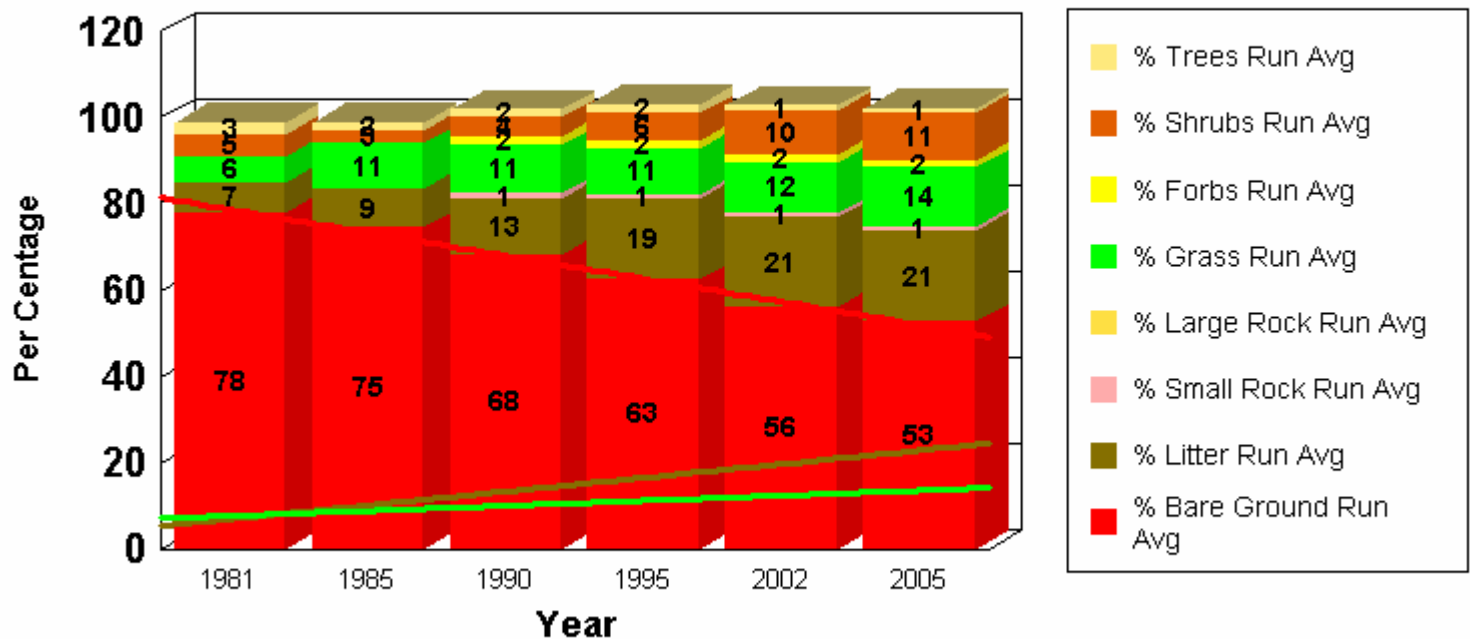
Ecological Site No.: 070BY063NM

Location: Township: 0050S Range 0270E Section 36 QtrQtr: SESE

Year	Bare Ground	Litter	Small Rock	Large Rock	Forbs	Grass	Shrubs	Trees	Running Average Bground	Running Average Litter	Running Average Srock	Running Average Lrock	Running Average Forb	Running Average Grass	Running Average Shrubs	Running Average Trees
1981	78.00	7.00				6.00	5.00	3.00	78.00	7.00				6.00	5.00	3.00
1985	71.00	11.00				15.00	1.00	1.00	74.50	9.00				10.50	3.00	2.00
1990	56.00	21.00	1.00		2.00	13.00	7.00		68.33	13.00	1.00		2.00	11.33	4.33	2.00
1995	45.00	36.00				8.00	12.00		62.50	18.75	1.00		2.00	10.50	6.25	2.00
2002	31.00	28.00				17.00	25.00	0.00	56.20	20.60	1.00		2.00	11.80	10.00	1.33
2005	35.00	24.00			1.00	23.00	17.00	0.00	52.67	21.17	1.00		1.50	13.67	11.17	1.00

Running Average Ground Cover Trends

With Trendlines



Traditional Range Condition and Similarity Index Data

VEGID: 281

65005 BOJAX-SOUTH

65005-EAST #1-D025

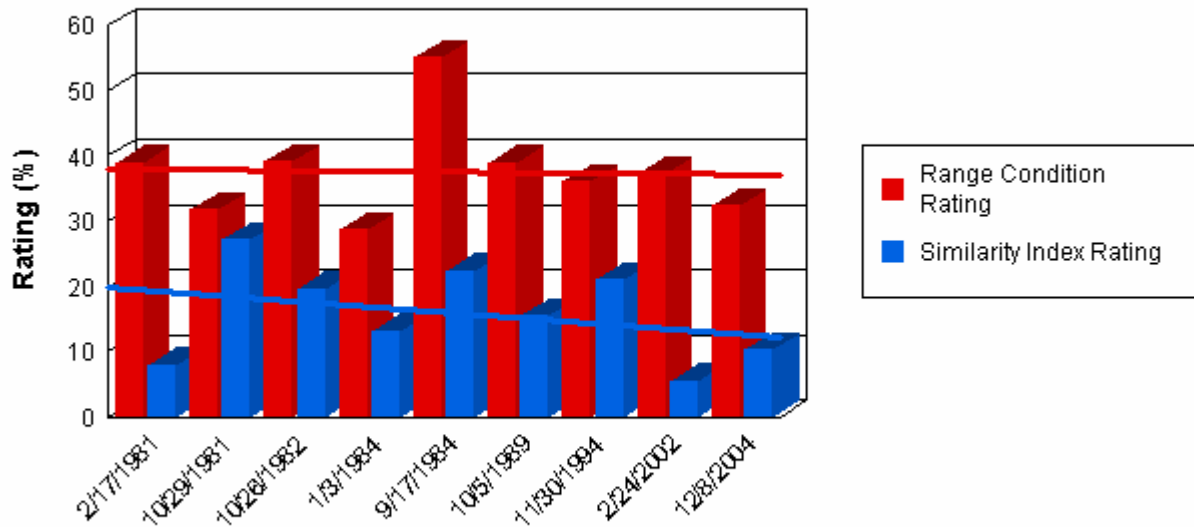
SANDY PLAINS CP-2

070BY055NM

Date	Range Cond.	Similarity Index	Total Production	Normal Year Production
02/17/1981	39.00	7.95	167.00	2,100
10/29/1981	31.76	27.24	1,430.00	2,100
10/26/1982	39.08	19.62	574.00	2,100
01/03/1984	28.76	13.19	385.00	2,100
09/17/1984	55.00	22.48	586.00	2,100
10/05/1989	39.00	15.52	382.00	2,100
11/30/1994	36.00	21.00	554.00	2,100
02/24/2002	37.23	5.52	116.00	2,100
12/08/2004	32.42	10.30	216.37	2,100

Traditional Range Condition vs Similarity Index

With Trendlines



Traditional Range Condition and Similarity Index Data

VEGID: 282

65005 BOJAX-SOUTH

65005-MIDDLE #2-D026

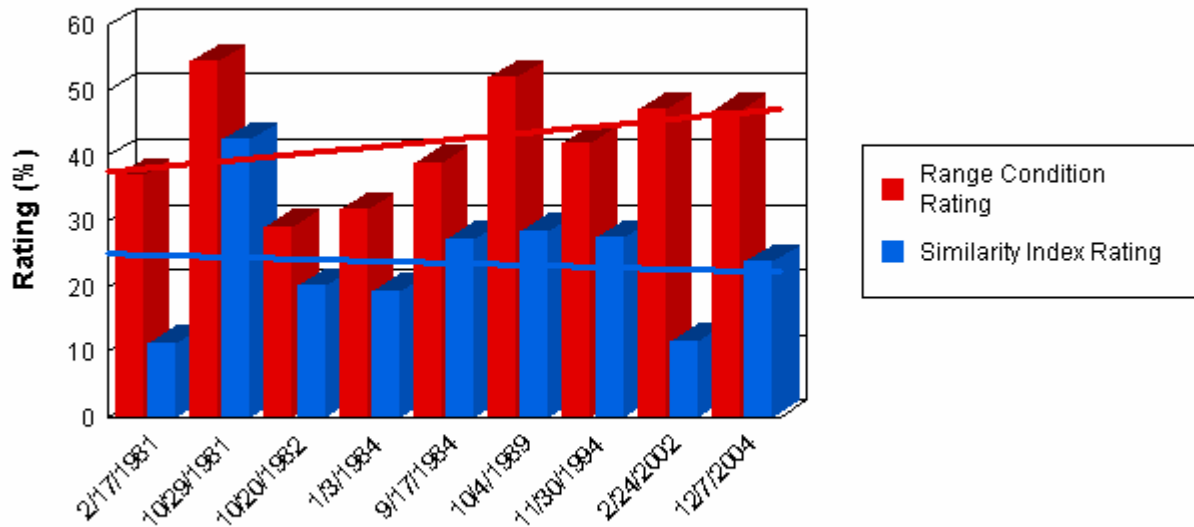
DEEP SAND CP-2

070BY063NM

Date	Range Cond.	Similarity Index	Total Production	Normal Year Production
02/17/1981	37.00	11.33	206.00	1,800
10/29/1981	54.51	42.44	1,086.00	1,800
10/20/1982	29.11	20.11	509.00	1,800
01/03/1984	31.73	19.28	580.00	1,800
09/17/1984	39.00	27.39	902.00	1,800
10/04/1989	52.00	28.56	634.00	1,800
11/30/1994	42.00	27.50	609.00	1,800
02/24/2002	47.08	11.61	212.00	1,800
12/07/2004	47.01	23.77	468.14	1,800

Traditional Range Condition vs Similarity Index

With Trendlines



Traditional Range Condition and Similarity Index Data

VEGID: 283

65005 BOJAX-SOUTH

65005-CEDAR #3-D027

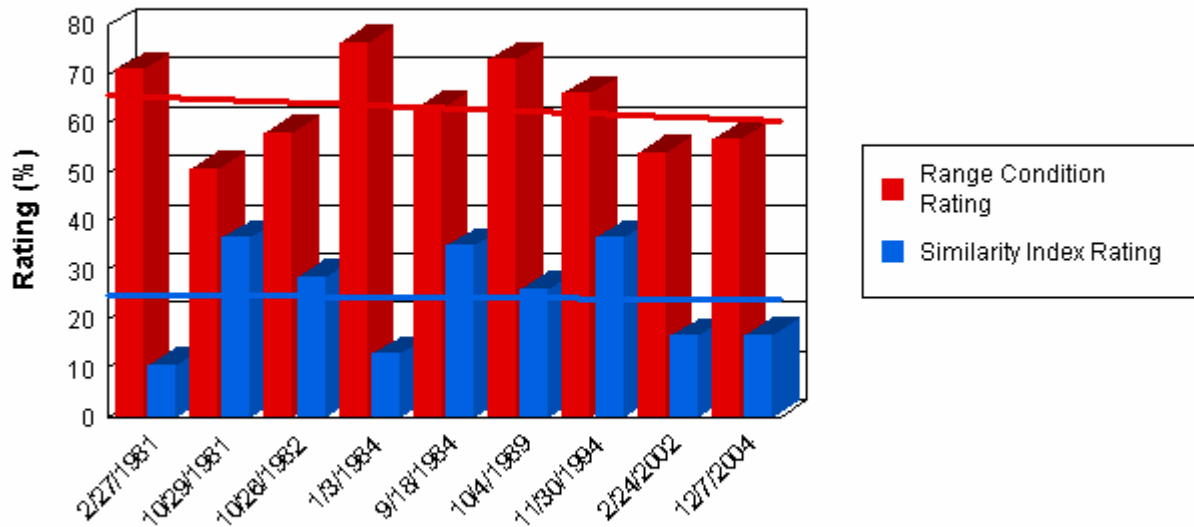
DEEP SAND CP-2

070BY063NM

Date	Range Cond.	Similarity Index	Total Production	Normal Year Production
02/27/1981	71.00	10.61	191.00	1,800
10/29/1981	50.70	36.61	827.00	1,800
10/26/1982	58.17	28.72	532.00	1,800
01/03/1984	76.46	13.00	234.00	1,800
09/18/1984	63.00	34.94	638.00	1,800
10/04/1989	73.00	26.11	472.00	1,800
11/30/1994	66.00	36.72	686.00	1,800
02/24/2002	54.10	16.50	303.00	1,800
12/07/2004	56.77	16.70	300.66	1,800

Traditional Range Condition vs Similarity Index

With Trendlines



Allotment Weighted Average Range Condition and Similarity Index

NM06000

Date Printed: 3/14/200

65005

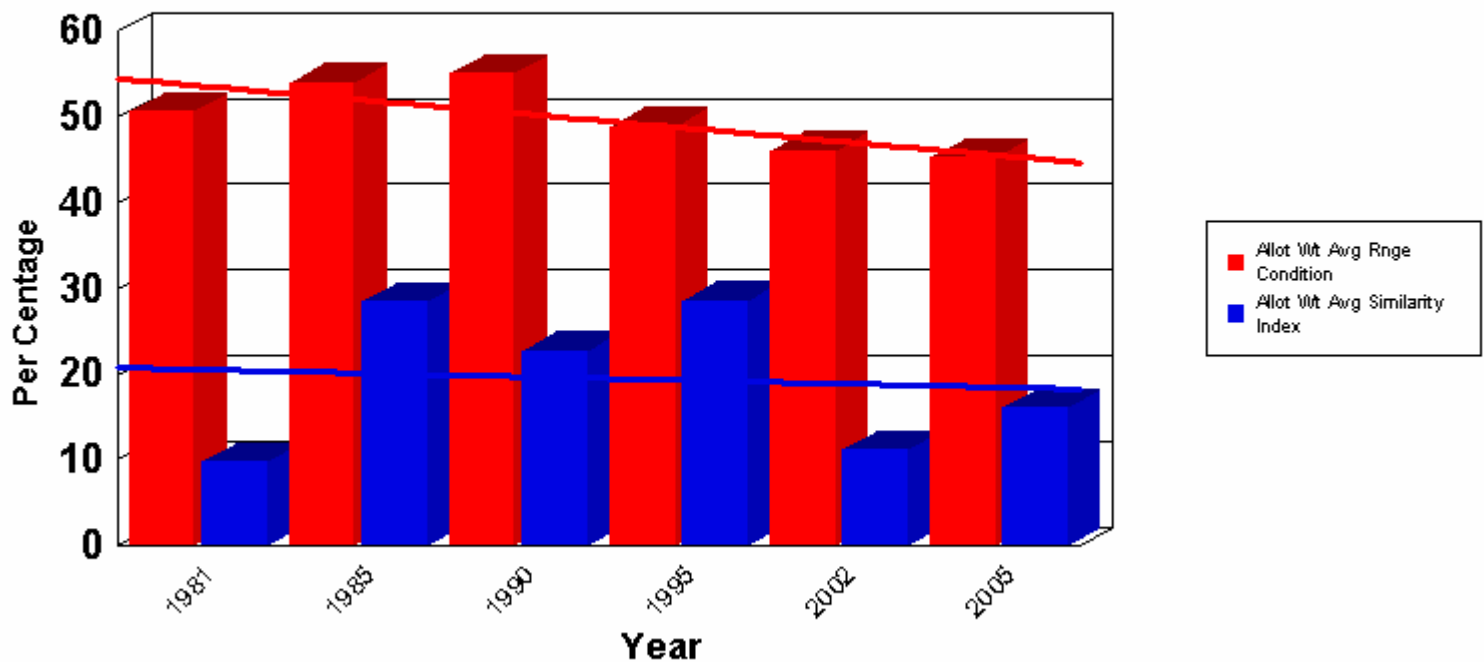
BOJAX-SOUTH

Data Information presented below is based on the allotment weighted average of range condition and similarity index ratings for the years included in the allotment monitoring evaluations. The trendline is based on linear regression for each data set.

Year	Range Condition	Similarity Index
1981	50.67	9.80
1985	54.05	28.45
1990	55.18	22.80
1995	48.91	28.60
2002	46.10	11.21
2005	45.32	16.10

Weighted Average Range Condition vs Similarity Index

With Trendlines



65005